converting reconstructed data into page description language data in a page description language form;

converting the page description language data into raster data;

B2 storing, in the band units, the converted raster data; and

printing the objects on a printing sheet in accordance with the stored raster data.

Please add claim 16 as follows:

--16. An image processing apparatus comprising:

B3 reconstructing means for reconstructing print data for instructing contents of objects positioned in one page in band units that are obtained by dividing the page into a plurality of regions;

converting means for converting the data reconstructed by said reconstructing means into page description language data that is in a page description language form; and

transmitting means for transmitting the page description language data;

wherein the reconstructing means determines whether the objects are positioned across a plurality of the band units.--

REMARKS

Claims 1-16 are pending in this application. By this Amendment, claims 1, 14 and 15 are amended and claim 16 is added. Support for claims 1, 14 and 15 are found in the instant-specification on page 19, line 5 to page 21, line 16 and Figures 8-11. Support for claim 16 is found in the specification on page 26, line 3. No new matter is added.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Claims 1-6 and 8-10 are rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent 5,588,095 to Dennis. Claim 7 is rejected under 35 U.S.C. §103(a) as obvious over Dennis in

view of U.S. Patent 5,859,956 to Sugiyama. Claims 11-15 are rejected under 35 U.S.C. §103(a) as obvious over Dennis in view of U.S. Patent 5,805,174 to Ramchandran. These rejections are respectfully traversed.

Applicants respectfully assert that Dennis fails to disclose, teach or suggest reconstructing means that decides, according to a type of the print data, whether the band units to be reconstructed have common data, as recited in claims 1, 14 and 15.

Dennis only discloses processing the metafile and converting all print objects into bandable print images for the entire page. That is, Dennis discloses a band generator 52 that converts each band of the banded primitive data file into a single bit-map data file for the entire page being processed (col. 4, lines 37-44 and col. 8, lines 4-8). However, Dennis fails to disclose, teach or suggest reconstructing means that decides, according to a type print data, whether the band units to be reconstructed have common data, as recited in claims 1, 14 and 15.

With respect to Sugiyama and Ramchandran, these references fail to disclose or teach the deficiencies discussed above.. Further, Sugiyama and Ramchandran also fail to disclose or teach the raster converting means for processing the page description language according to a type of command indicated by the page description language data, as recited in claim 12.

Applicants respectfully submit that none of Dennis, Sugiyama or Ramchandran, nor any combination of these references, teach, disclose or suggest all of the features recited in claims 1-16. Thus, the asserted combination of Dennis, Sugiyama and Ramchandran fail to render obvious the subject matter of claims 1-16 under 35 U.S.C. §103(a). Withdrawal of the various rejections of claims 1-16 under 35 U.S.C. §103(a) as being unpatentable over asserted combinations of Dennis, Sugiyama and Ramchandran is respectfully requested.

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Favorable and prompt allowance of claims 1-16 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

David J. Cho
Registration No. 48,078

JAO:DXC/kys

Attachments:
Request for Continued Examination(RCE)
Appendix

Date: November 8, 2002

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION
Please grant any extension necessary for entry;
Charge any fee due to our Deposit Account No. 15-0461

APPENDIX

Changes to Claims:

Claim 16 is added.

The following is a marked-up version of the amended claims:

1. (Twice Amended) An image processing apparatus comprising:

reconstructing means for reconstructing print data for instructing contents of objects positioned in one page in band units that are obtained by dividing the page into a plurality of regions,

converting means for converting the data reconstructed by said reconstructing means into page description language data that is in a page description language form; and

transmitting means for transmitting the page description language data;

wherein the reconstructing means ~~selects a predetermined way of reconstruction~~decides, according to a type of the print data, whether the band units to be reconstructed have common data.

14. (Twice Amended) An image processing system comprising:

an image processing apparatus including:

reconstructing means for dividing, in band units, print data that indicates contents of objects positioned in one page which is composed of a plurality of the bands and reconstructing print data in the band units,

converting means for converting the data reconstructed by said reconstructing means into page description language data that is in a page description language form, and

transmitting means for transmitting the page description language data,

wherein the reconstructing means ~~selects a predetermined way of the reconstruction~~decides, according to a type of the print data, whether the band units to be reconstructed have common data; and

an output apparatus including:

receiving means for receiving the page description language data,

raster converting means for converting the page description language data received by said receiving means into raster data,

a buffer for storing, in the band units, the raster data converted by said raster converting means, and

a printing mechanism for printing the objects on a printing sheet in accordance with the raster data read from said buffer.

15. (Twice Amended) An image processing method for an image processing system including an image processing apparatus and an output apparatus, comprising:

dividing, in band units, print data that indicates contents of objects positioned in one page which is composed of a plurality of the bands;

reconstructing the print data in the band units according to a type of the print data, whether the band units to be reconstructed have common data;

converting reconstructed data into page description language data in a page description language form;

converting the page description language data into raster data;

storing, in the band units, the converted raster data; and

printing the objects on a printing sheet in accordance with the stored raster data.